

**Amendments to the Specification:**

Please replace paragraph [0020] with the following amended paragraph:

[0020] The temperature management system manages the temperature of one or more thermal components in downhole tools, such as those suspended on a drill string or a wireline. The temperature management system comprises a heat exchanger thermally coupled with the thermal component, or thermally coupled with a chassis of thermal components. The temperature management system also comprises a heat storage unit. A thermal conduit system thermally couples the heat exchanger and the heat storage unit. The thermal conduit system transfers heat absorbed by the heat exchanger from the one or more thermal components to the heat storage unit. The heat storage unit may in turn absorb the heat from the thermal conduit or directly from the one or more thermal components. A second, different heat exchanger coupled to the heat storage unit may be utilized to efficiently transfer heat from the thermal conduit. The heat storage unit may be disposed locally to the thermal component, or may be remotely disposed, *e.g.*, the heat storage unit may be in the same cavity as the one or more thermal components, or may be located external to the thermal component cavity. The heat storage unit thus operates as a type of heat sink that does not rely on the dissipation of heat from the heat storage unit to another location to manage the temperature of the thermal components. The temperature management system is thus able to discretely manage the temperature of thermal components inside a cavity instead of managing the temperature of the cavity as a whole.